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(74) Agent: BORDEN, Paula A.; BOZICEVIC, FIELD &
FRANCIS LLP, 1900 University Avenue, Suite 200, East
Palo Alto, California 94303 (US).

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(71) Applicant (*for all designated States except US*): THE
REGENTS OF THE UNIVERSITY OF CALIFOR-
NIA [US/US]; 1111 Franklin Street, 12th Floor, Oakland,
California 94607-5200 (US).

(72) Inventors; and

(75) Inventors/Applicants (*for US only*): REILING, Keith
Kinkad [US/US]; 1055 Oak Street, San Francisco,
California 94117 (US). NEWMAN, Jack D. [US/US];
1715 Sacramento Street, Berkeley, California 94702 (US).
WITHERS III, Sydnor T. [US/US]; 1670 San Benito
Street, Richmond, California 94804 (US). PITERA, Dou-
glas J. [US/US]; 4099 Howe Street, Unit #302, Oakland,
California 94611 (US). KEASLING, Jay D. [US/US];
1160 Sterling Avenue, Berkeley, California 94708 (US).
MARTIN, Vincent J.J. [CA/US]; 263 Lake Drive, Kens-
ington, California 94708 (US).

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(54) Title: METHODS FOR IDENTIFYING A BIOSYNTHETIC PATHWAY GENE PRODUCT

(57) Abstract: The present invention provides isolated, genetically modified host cells, where a host cell is genetically modified with a nucleic acid that includes a nucleotide sequence encoding a biosynthetic pathway enzyme. Synthesis of the enzyme in the host cell results in conversion of a substrate for the enzyme into a biosynthetic pathway intermediate, which intermediate is produced in an amount effective to inhibit growth of the genetically modified host cell. The present invention further provides compositions and kits comprising a subject genetically modified host cell. Subject host cells are useful for identifying a gene product having activity in a biosynthetic pathway. The present invention further provides methods of identifying a gene product having activity in a biosynthetic pathway.

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